

Harikumar et al. (Proc. Indian Acad. Sci. (E & P), v.109, pp.381-391, 2000) though there may be differences in detail.

It may be noted that the colour scale bar provided appears to be incorrect. For a properly corrected map, generally, most of the anomalies should lie within 300 nT with localized much higher or lower anomalies. In the present map, possibly due to the incorrect scale bar, there appears to be a preponderance of very high magnitude anomalies with very large ranges.

A point of concern about the map is that there is no mention of the grid interval used. As the original data have not been used, and the contoured maps have been digitized and gridded, the grid interval is of paramount importance. In our experience of working with the data digitized from the contour maps, we find that the maps are very sensitive to the grid spacing used. If the grid spacing is very small, it generates pairs of high low features, "bull's eye pattern" and "string of beads" effect. In particular, we find that if the grid interval is reduced to below 2 km, then though the gross features do not change, additional (E-W) high-low pairs appear and the extreme values increase dramatically. However, with a grid spacing greater than 2 km, the results are quite stable i.e. the extreme values do not change and most of the anomalies are within 300 nT. It may be worthwhile to note that for most of the available degree sheet maps, along the flight lines the data have been collected very closely, but the flight lines are separated by 4 km. We tend to believe that the flight line spacing (related to Nyquist frequency) has a role to play in the grid interval used to produce stable results. It is possible to use a smaller grid

interval and then filter out the noise generated; however, in that case it would help the user involved in interpretation, to know those details.

An aeromagnetic map of this scale and extent has been long overdue and the present map definitely establishes the need for a detailed aero-magnetic survey of the unexplored region of the entire country to be undertaken on a priority basis. This map should prove to be of great help to all earth scientists working on problems of the Indian peninsula especially to geophysicists working with gravity, magnetic, heat flow, magneto-telluric, and seismic data. The aeromagnetic anomalies show much larger variations than the gravity anomalies due to the larger susceptibility variations than density variations of the crustal rocks and this has great relevance to the different metamorphic grades of the crustal rocks. Regional metamorphism plays a key role in transforming the magnetic signatures of rocks and many minerals are associated with faults and intrusions; it is in this light that the map will also be invaluable to petrologists, mineralogists, structural geologists and students, among others. In particular, it will be of great help to both geologists and geophysicists planning surveys, as it could help them to decide profile extent and direction. Coupled with other data, it could be used for exploration purposes, to map subsurface structures, build tectonic history of the region and as an aid to interpretation of other geophysical data.

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**MAHANADI DELTA - GEOLOGY, RESOURCES AND BIODIVERSITY**, Edited by N.H. Mahalik, C-13, HIG, OSBH Colony, Baramunda, Bhubaneswar - 751 003 and published by the Asian Institute of Technology Alumni Association (India Chapter), New Delhi, 2000, 169p., Rs.500/-, US\$50.

There have been many studies on deltas of different parts of the world, mostly on the physical features and some on their resources. Noteworthy among them are those by H.N. Fisk, H.Th. Verstappen, R.J. Russel, J.P. Morgan, M.L. Broussand and L.D. Wright. Studies on some aspect or the other on modern deltas of India are few and far between. The available studies deal mostly with the physical, geomorphic, biological and natural resources, since the 1940s. A relatively comprehensive attempt to present the

then available literature on different aspects of modern Indian deltas are those by K. Bagchi (1944, The Ganges Delta, Univ. of Calcutta, 157p.; 1972, The Bhagirathi-Hoogly basin, Proc. Interdisciplinary Symp., Sibendranath Kanjilal, Calcutta, 361p) and by R. Vaidyanadhan (Editor, 1991, Quaternary Deltas of India. Mem. Geol. Soc. India, no.22, 291p).

The volume under review on Mahanadi Delta is a laudable attempt to bring together data available on

different aspects of the region written by specialists in their respective fields. Though most of the data have been already published in different journals, a few have been obviously written specially for this volume to cover the geological, geophysical, geomorphic, faunal (turtles), floral (mangrove swamps) and resources (water, soil, hydrocarbon etc). The sixteen chapters of the book are divided broadly under the following heads - Geology (1-6, 70p), Resources (7-13, 68p) and Biodiversity (14-16, 30p). Coloured and black and white figures and photographs suitably illustrate the text.

In an edited volume of this kind, there are bound to be differences in the style of writing and presentation by different authors. There are a number of instances of poor construction in language, grammatical and typographical errors. A few inferences made in the text may be controversial, but this is not uncommon in published literature. In spite of these few shortcomings, this publication is recommended to those interested in Indian deltas.

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**AN INTRODUCTION TO THE MAMMALIAN FAUNA OF THE SIWALIK SYSTEM: BIODIVERSITY OF THE SIWALIK FAUNA** by K.N. Prasad, Prasad Publications, Chennai, 2001, 295p. Price: Rs. 300/- (\$30) for paperback; Rs.400 (\$40) for hard bound

In consideration of the fact that there are so few updates on Indian Siwalik faunas, the present book by K.N. Prasad is a notable event. The author in his own right has vast experience in investigating Siwalik mammalian assemblages, – specifically Siwalik primates, and is one of the most qualified scientists of the country to undertake this responsibility. The book is aimed to bring together “all relevant information on Siwalik in one publication”, which in itself is a stupendous task. The problems in achieving this goal are daunting for anyone, concepts of phylogenetic lineages have radically changed over the last five decades; the relationships of several taxa described on the basis of isolated and fragmentary material to the other, better described material from India and Pakistan, is unclear; in addition there are continuing problems in synonymy. Given these constraints, Prasad has done a commendable job in

putting together a good database for research scientist to enable him to get current overview of the Siwalik fauna. It is obvious that his body of work has entailed considerable dedication and perseverance on Prasad's part.

The author has made an effort to profusely illustrate the taxa described, but several figures are not decipherable, for example Fig.6 *Presbytis*. In general, the ink drawings need to be improved, some of these are actually either printed sideways (Fig.10, *Sivapithecus*, page 60) and even upside down (Fig.23 *Hyaena striata*, page 109). By and large, references are comprehensive and a good source of information. In the end, I feel that the book will serve as an important starting point for the research scientists and will be greatly used.

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**ERRATA**

In NOTES item on: "Is Son-Narmada North Fault Getting Active" by V.K. Khanna and A.P. Agarwal (JGSI, v.57, p.548, June 2001), line 1 para 2 should read as "Around Jabalpur, the activities due to SNNF have been very limited".